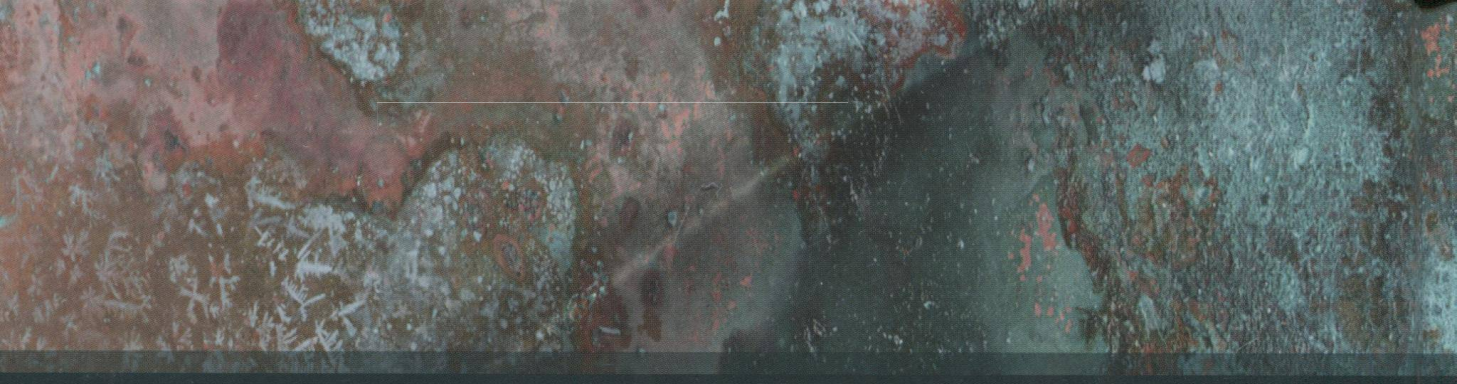

This comprehensive, self-contained guide to X-ray spectroscopy will equip you with everything you need to begin extracting the maximum amount of information available from X-ray spectra.

Key topics such as the interaction between X-rays and matter, the basic theory of spectroscopy, and selection and sum rules, are introduced from the ground up, providing a solid theoretical foundation. The book also introduces core underlying concepts such as atomic structure, solid-state effects, the fundamentals of tensor algebra and group theory, many-body interactions, scattering theory, and response functions, placing spectroscopy within a broader conceptual framework, and encouraging a deep understanding of this essential theoretical background.

Suitable for graduate students, researchers, materials scientists, and optical engineers, this is the definitive guide to the theory behind this powerful and widely used technique.

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